SWEETENERS AS A CONTRIBUTOR FACTOR TO INTESTINAL MICROBIOTA ALTERATION

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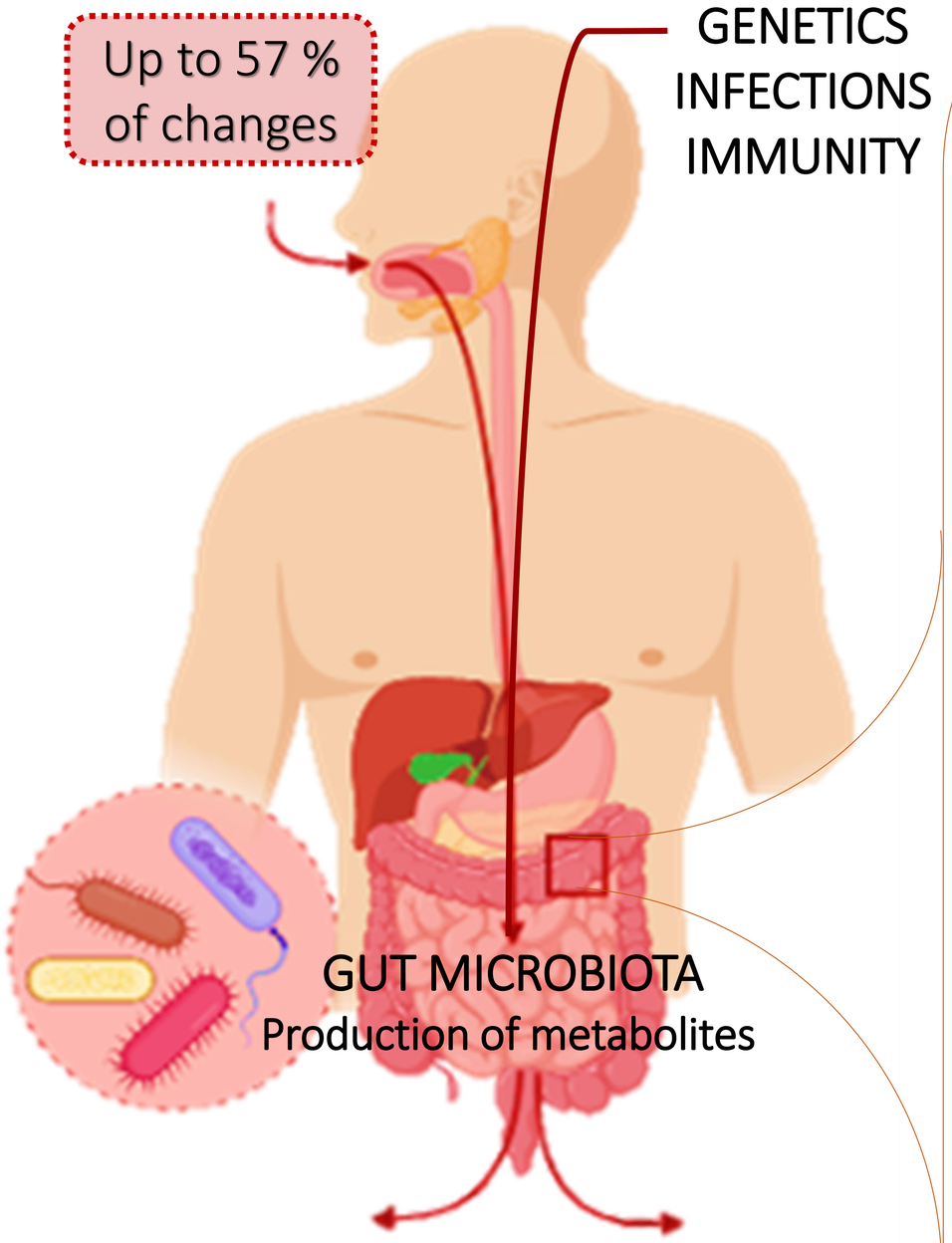
AIMS

1. **To understand** the **importance of feeding while causing modifications to the intestinal microbiota** and, as a consequence, **influence the individual health.**
2. **To evaluate** the **role played by sweeteners in the intestinal microbiota**, observing the evolution of the studies carried out for this purpose.

DIET INTAKE + LIFE STYLE, AGE, CLINICAL HISTORY, GENETICS, INFECTIONS, IMMUNITY

Up to 57 % of changes



DYSBIOSIS

Dysregulation of immune system, inflammation and disease

SYMBIOSIS

Immune system **homeostasis** and regulation. Healthy life

SWEETENER	GUT BARRIER	STUDIES RESULTS
SACCHARIN		○ Increases the number of aerobic and prevention of anaerobic sensitive to saccharin. ○ Elevated glycemic response. ○ Liver inflammation.
SUCRALOSE		○ Decreases the number of aerobic and anaerobic bacteria. ○ Variations in the microbiota related to inflammations.
STEVIOL GLUCOSIDES	Stevioside, Rebaudioside A, Fructans	○ Weak inhibition of anaerobic bacteria. ○ Weak inhibition of aerobic bacteria ○ Improves the growth of important strain for intestinal function.
ISOMALTOSE		○ Bifidogenic properties that could contribute to a healthy colonic environment.
MALTITOL		○ Bifidogenic properties
LACTITOL		○ Excessive consumption produces laxative effects. ○ Decreases fecal pH, increase butyrate production and IgA secretion without signs of inflammation in the mucosa. ○ Bifidogenic properties and prebiotic effect.
XYLITOL		○ Change the fecal population from Gram negative to **Gram** positive. ○ Causes prebiotic stimulation

CONCLUSIONS

1. **Clear evidence that changes in concentration and type of microbiota are induced by different types of intake**. Further studies are needed to find out if the modifications of the intestinal microbiota produced by the diet are a transitory or long-term event.
2. **The studies carried out so far do not provide clear evidence of any adverse effects produced by sweeteners to the intestinal microbiota taking into account the doses released for human use**. This confirms the point of view supported by all the major international authorities of food safety and health regulations, which state that **sweeteners are safe at the levels currently approved.**

MAIN REFERENCES

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